

Client's ref.: A91260
Our ref: 0535-9440-USf/Jonah/Steve

What is claimed is:

- 1 1. A method for communication connection in a
2 wireless network comprising a plurality of wireless
3 bridges individually associated with at least one
4 electronic device, performing the steps of:
 - 5 (a) a first electronic device transmitting a first
6 data packet to a first wireless bridge, the
7 first data packet comprising a source address
8 for a first identity corresponding to the first
9 electronic device, and a destination address
10 for a second electronic device corresponding to
11 a second electronic device;
 - 12 (b) the first wireless bridge attaching a first
13 tunnel header to the first data packet to form
14 a first wireless data packet, and transmitting
15 the first wireless data packet via the wireless
16 network, the first tunnel header comprising a
17 third identity corresponding to the first
18 wireless bridge;
 - 19 (c) a second wireless bridge receiving the first
20 wireless data packet via the wireless network,
21 removing the first tunnel header therefrom to
22 acquire a second data packet, storing an
23 association relationship between the first
24 electronic device and the first wireless
25 bridge, and transmitting the second data packet
26 to the second electronic device; and
 - 27 (d) the second electronic device receiving the
28 second data packet, respectively employing the

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29 first identity and the second identity as a
30 destination address and a source address, and
31 transmitting data to the first electronic
32 device.

33 2. The method as claimed in claim 1 further
34 comprising a step of the first electronic device and the
35 second electronic device establishing communication
36 connection with each other.

1 3. The method as claimed in claim 1 wherein the
2 step (b) further comprises a step of (e) the first
3 wireless bridge transmitting the first wireless data
4 packet using a broadcast method.

1 4. The method as claimed in claim 1 wherein the
2 step (b) further comprises a step of (f) one of the
3 wireless bridges other than the first wireless bridge
4 receiving and acquiring the broadcasted wireless data
5 packet, and storing the association relationship between
6 the first electronic device and the first wireless bridge
7 according to the first identity and the third identity.

1 5. The method as claimed in claim 1 wherein the
2 step (d) further comprises the steps of:

3 (g) the second electronic device transmitting a
4 third data packet to the second wireless
5 bridge, the third data packet comprising the
6 first identity as a destination address, and
7 the second identity as a source address;
8 (h) the second wireless bridge attaching a second
9 tunnel header to the third data packet to form

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10 a second wireless data packet according to the
11 stored association relationship, the second
12 tunnel header comprising a receiving address
13 for the third identity, and a temporary
14 transmission address for a fourth identity
15 corresponding to the second wireless bridge;
16 (i) the first wireless bridge receiving the second
17 wireless data packet, removing the second
18 tunnel header to acquire a fourth data packet,
19 and storing an association relationship between
20 the second wireless bridge and the second
21 electronic device; and
22 (j) the first electronic device receiving the fourth
23 data packet.

1 6. The method as claimed in claim 1 wherein the
2 first tunnel header further comprises a receiving address
3 for a broadcast method, and a packet type.

1 7. The method as claimed in claim 6 wherein the
2 second tunnel header further comprises a receiving
3 address for the first wireless bridge and the packet
4 type.

1 8. The method as claimed in claim 7 wherein the
2 packet type comprises "0x5628".

1 9. The method as claimed in claim 7 wherein the
2 wireless bridge comprises an extended bridge, an inter-
3 building bridge or a repeater.

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1 10. A system for communication connection utilized
2 in a wireless network comprising a plurality of wireless
3 bridges for communication connection with at least one
4 electronic device, comprising:
5 a first electronic device, located in the wireless
6 network, and transmitting a packet;
7 a first wireless bridge, corresponding to the first
8 electronic device, receiving the packet,
9 attaching a tunnel header thereto to form a
10 wireless data packet, and broadcasting the
11 wireless data packet;
12 a second wireless bridge, located in the wireless
13 network, receiving the wireless data packet
14 from the first wireless bridge, and removing
15 the tunnel header therefrom to acquire the
16 packet; and
17 a second electronic device, corresponding to the
18 second wireless bridge, receiving the packet
19 from the second wireless bridge.

1 11. The system as claimed in claim 10 wherein the
2 packet comprises a first identity corresponding to the
3 second electronic device, and does not be received by any
4 electronic device other than the second electronic
5 device.

1 12. The system as claimed in claim 10 wherein the
2 tunnel header further comprises a receiving address for a
3 broadcast method, and a packet type.

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1 13. The system as claimed in claim 12 wherein the
2 packet type comprises "0x5628".

1 14. The system as claimed in claim 10 wherein the
2 wireless bridge comprises an extended bridge, an inter-
3 building bridge or a repeater.

1 15. A method for communication connection utilized
2 in a wireless network comprising a plurality of wireless
3 bridges for communication connection with at least one
4 electronic device, performing the steps of:

5 a first electronic device transmitting a packet to a
6 first wireless bridge, the packet comprising a
7 first identity corresponding to the first
8 electronic device;

9 the first wireless bridge attaching a tunnel header
10 to the packet to form a wireless data packet,
11 the tunnel header comprising a second identity
12 corresponding to the first wireless bridge;

13 the first wireless bridge broadcasting the wireless
14 data packet to a second wireless bridge via the
15 wireless network; and

16 the second wireless bridge storing an association
17 relationship between the first wireless bridge
18 and the first electronic device according to
19 the first identity and the second identity.

1 16. The method as claimed in claim 15 wherein the
2 tunnel header further comprises a receiving address for a
3 broadcast method, and a packet type.

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1 17. The method as claimed in claim 16 wherein the
2 protocol type comprises "0x5628".

1 18. The method as claimed in claim 15 wherein the
2 wireless bridge comprises an extended bridge, an inter-
3 building bridge or a repeater.